System Overview
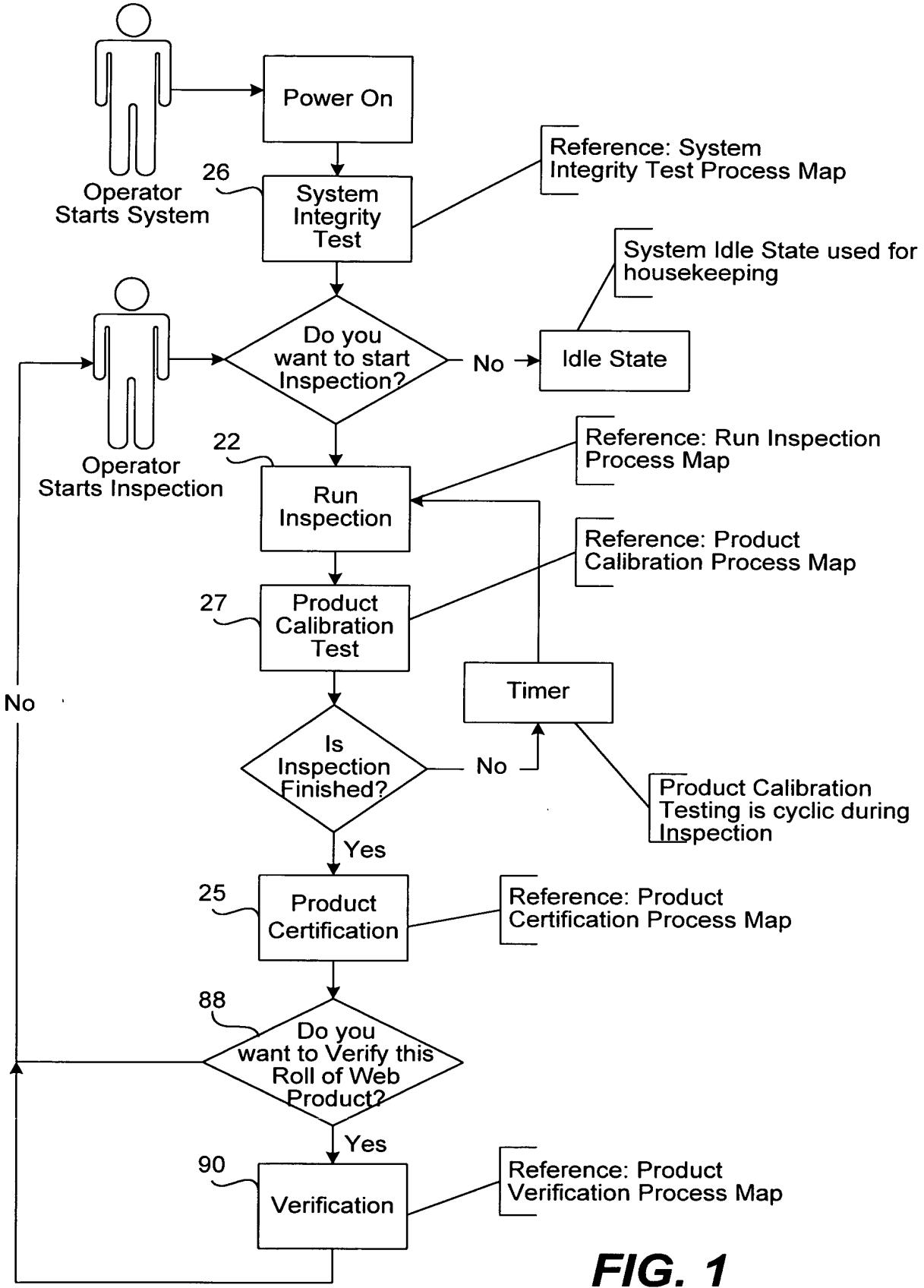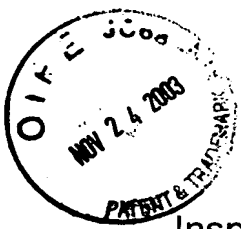## Webview System Overview
The Process Map describes the operation of the Webview System

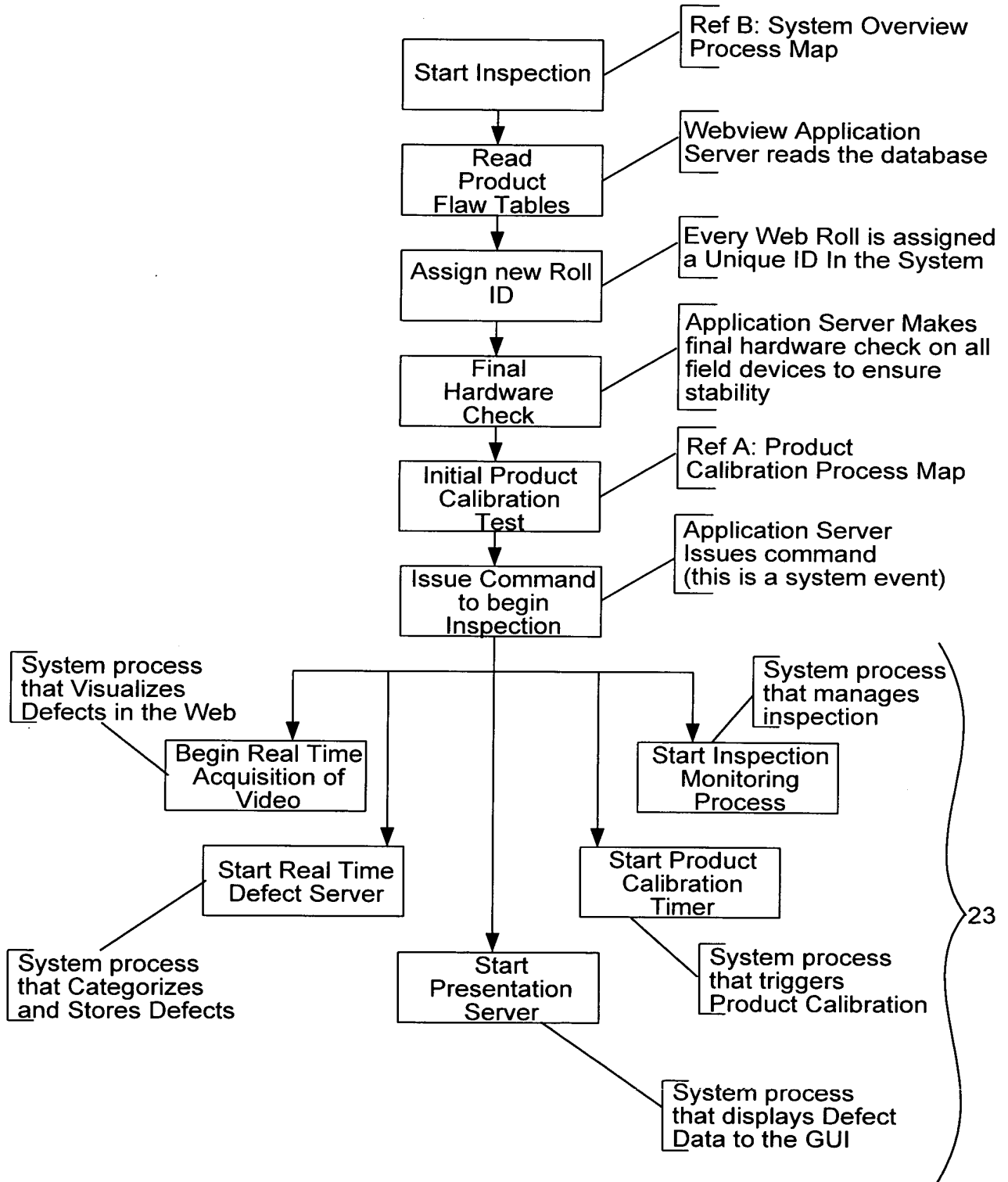**FIG. 1**

Inspection

Inspection Process
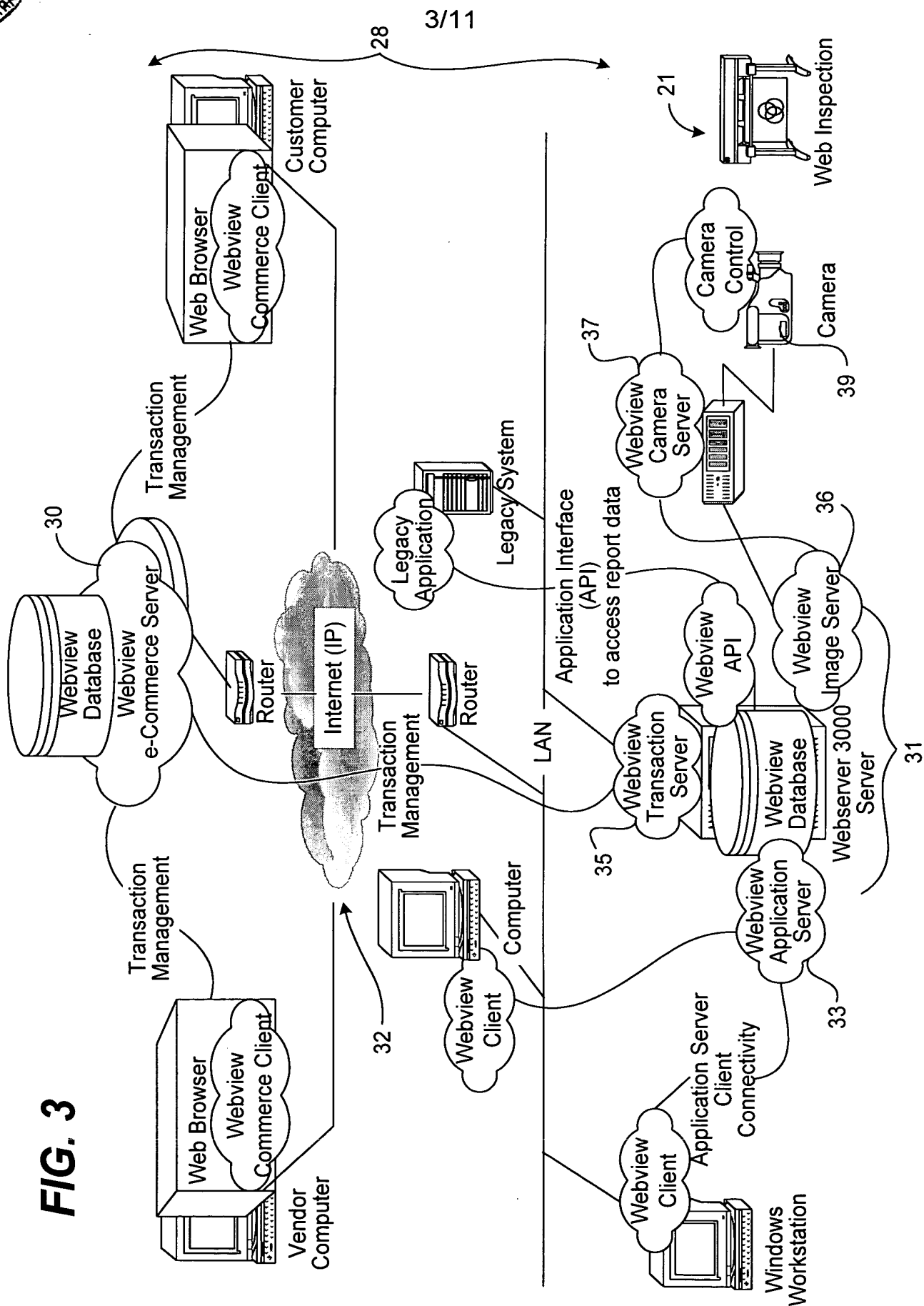
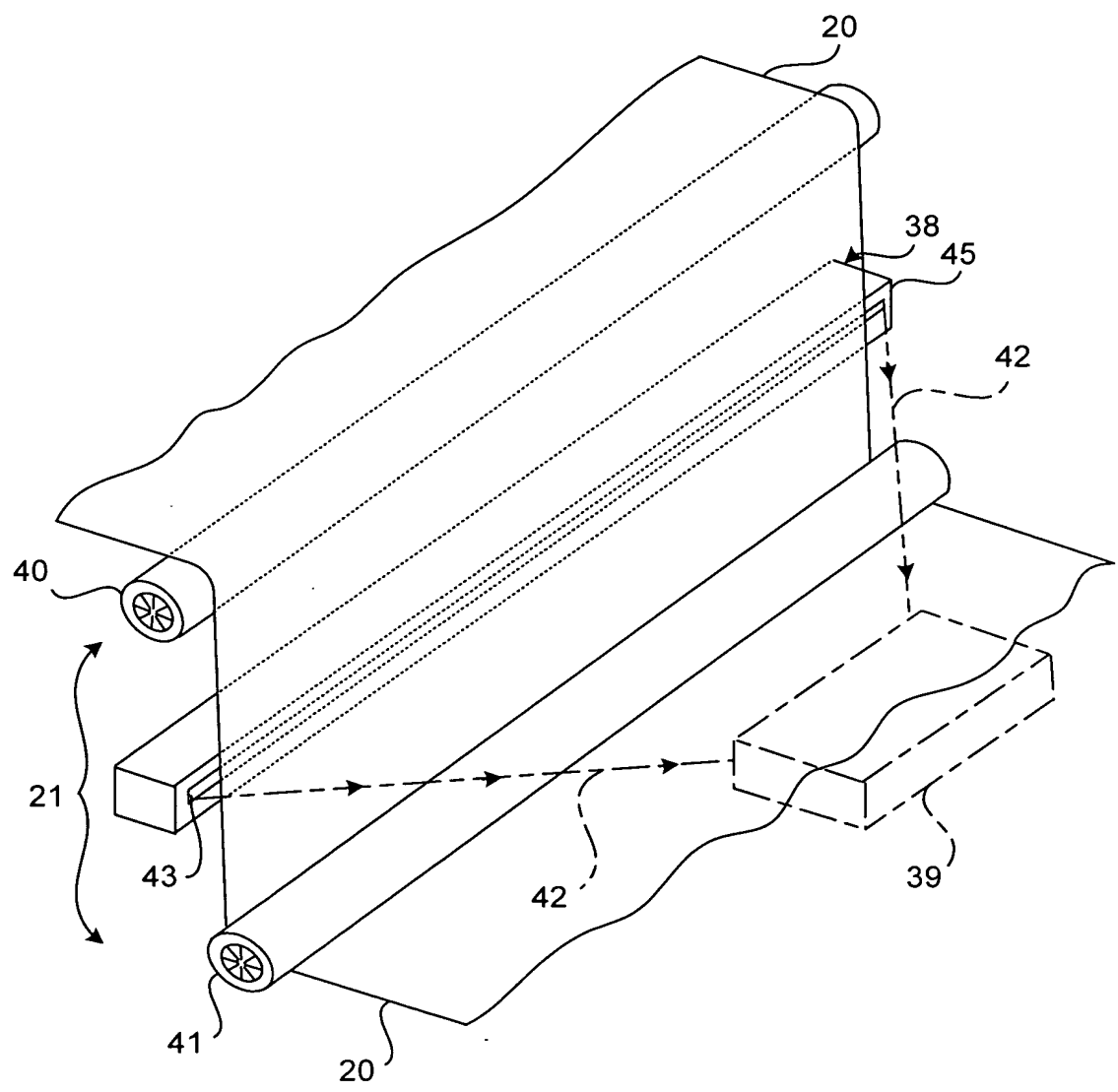This Process Map describes the Web Inspection Process.

```
                              ┌──────────────────┐      ⌐Ref B: System Overview
                              │ Start Inspection │       Process Map
                              └──────────────────┘
                                       │
                                       ▼
                              ┌──────────────────┐      ⌐Webview Application
                              │      Read        │       Server reads the database
                              │    Product       │
                              │  Flaw Tables     │
                              └──────────────────┘
                                       │
                                       ▼
                              ┌──────────────────┐      ⌐Every Web Roll is assigned
                              │ Assign new Roll  │       a Unique ID In the System
                              │       ID         │
                              └──────────────────┘
                                       │
                                       ▼
                              ┌──────────────────┐      ⌐Application Server Makes
                              │      Final       │       final hardware check on all
                              │    Hardware      │       field devices to ensure
                              │     Check        │       stability
                              └──────────────────┘
                                       │
                                       ▼
                              ┌──────────────────┐      ⌐Ref A: Product
                              │ Initial Product  │       Calibration Process Map
                              │   Calibration    │
                              │      Test        │
                              └──────────────────┘
                                       │
                                       ▼
                              ┌──────────────────┐      ⌐Application Server
                              │ Issue Command    │       Issues command
                              │  to begin        │       (this is a system event)
                              │  Inspection      │
                              └──────────────────┘
```

⌐System process
that Visualizes
Defects in the Web

⌐System process
that manages
inspection

Begin Real Time
Acquisition of
Video

Start Inspection
Monitoring
Process

Start Real Time
Defect Server

Start Product
Calibration
Timer

⌐System process
that Categorizes
and Stores Defects

Start
Presentation
Server

⌐System process
that triggers
Product Calibration

} 23

⌐System process
that displays Defect
Data to the GUI

FIG. 2

FIG. 3

Vendor Computer
Web Browser
Webview Commerce Client

Transaction Management

Customer Computer
Web Browser
Webview Commerce Client

28

30

Transaction Management

Webview Database
Webview e-Commerce Server

Router

Internet (IP)

Legacy Application
Legacy System

Transaction Management

Router

32

Computer
Webview Client

LAN

35

Webview Transaction Server

Application Interface (API) to access report data

37

Webview Camera Server

Camera Control

Camera

39

21

Web Inspection

Webview API

Webview Database

Webview Image Server

Webserver 3000 Server

36

31

Webview Application Server

33

Application Server Client Connectivity

Webview Client

Windows Workstation

FIG. 4
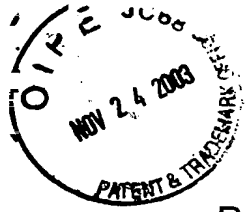
System Integrity Test Process
This Process Map describes the System Integrity Check Process that Typically occurs during the Start up of the Webview 3000 Application Server.
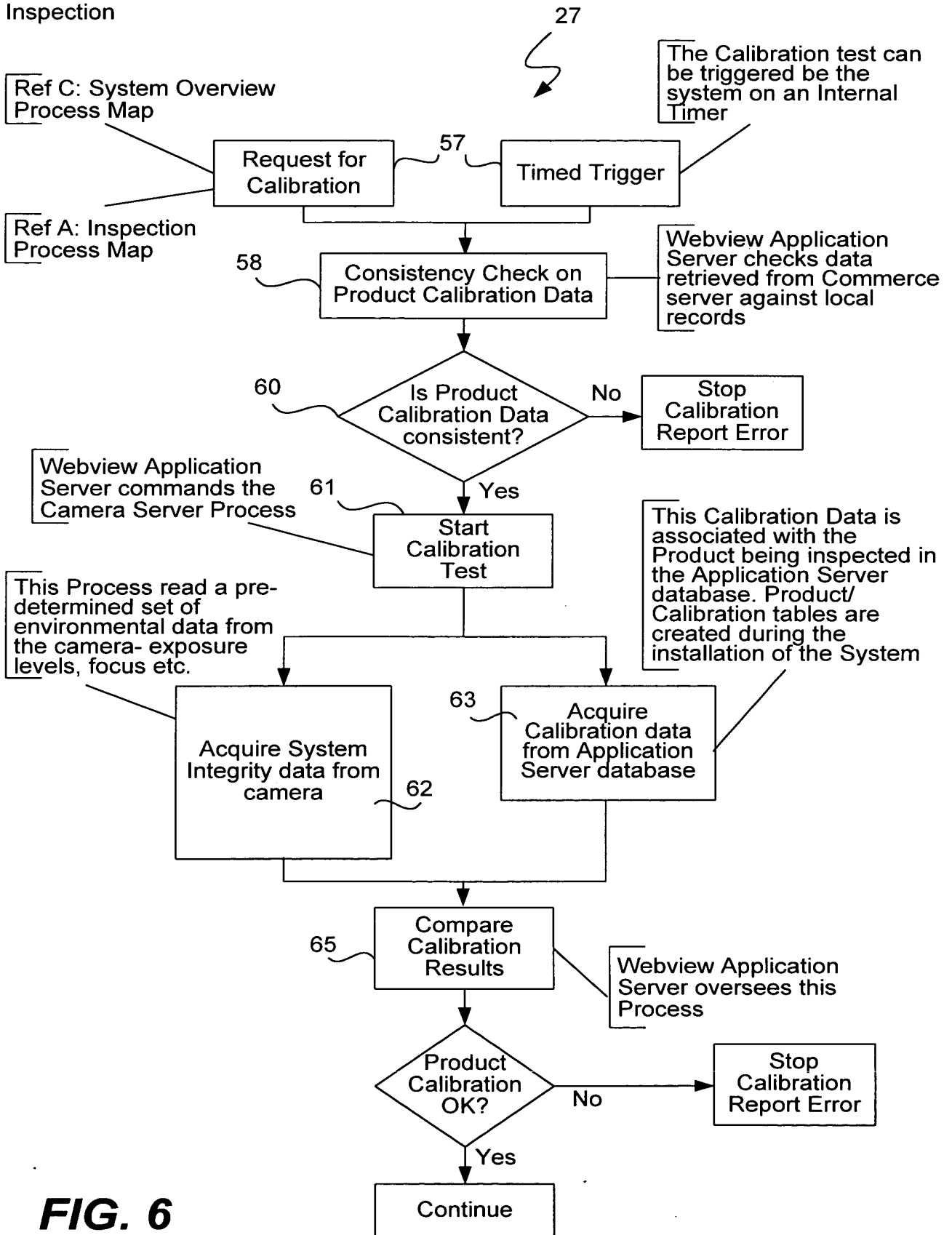
26

Start Integrity Check — 46 — Timed Trigger

Ref A: System Overview Process Map

The integrity test can be triggered by the system

47 — Is Commerce Server Available? — No → Report Error

Yes

48 — Is Camera Available? — No

Yes

Webview Application Server commands the Camera Server Process

50 — Start System Integrity Test

This Process is triggered by the Camera Server but runs in the camera firmware

System Integrity Test Data will be a global data set that applies to all Webview 3000 Application Servers that communicate with the Commerce Server

Camera Self Test — 51

52 — Acquire System Integrity data from camera

53 — Acquire System Integrity Test Data from Commerce Server

This Process read a pre-determined set of environmental data from the camera- exposure levels, focus etc.

55 — Compare Integrity Results

Webview Application Server oversees this Process

System Integrity OK? — No → Report Error

Yes

56 — System Integrity Check Complete

FIG. 5

Product Calibration Test Process

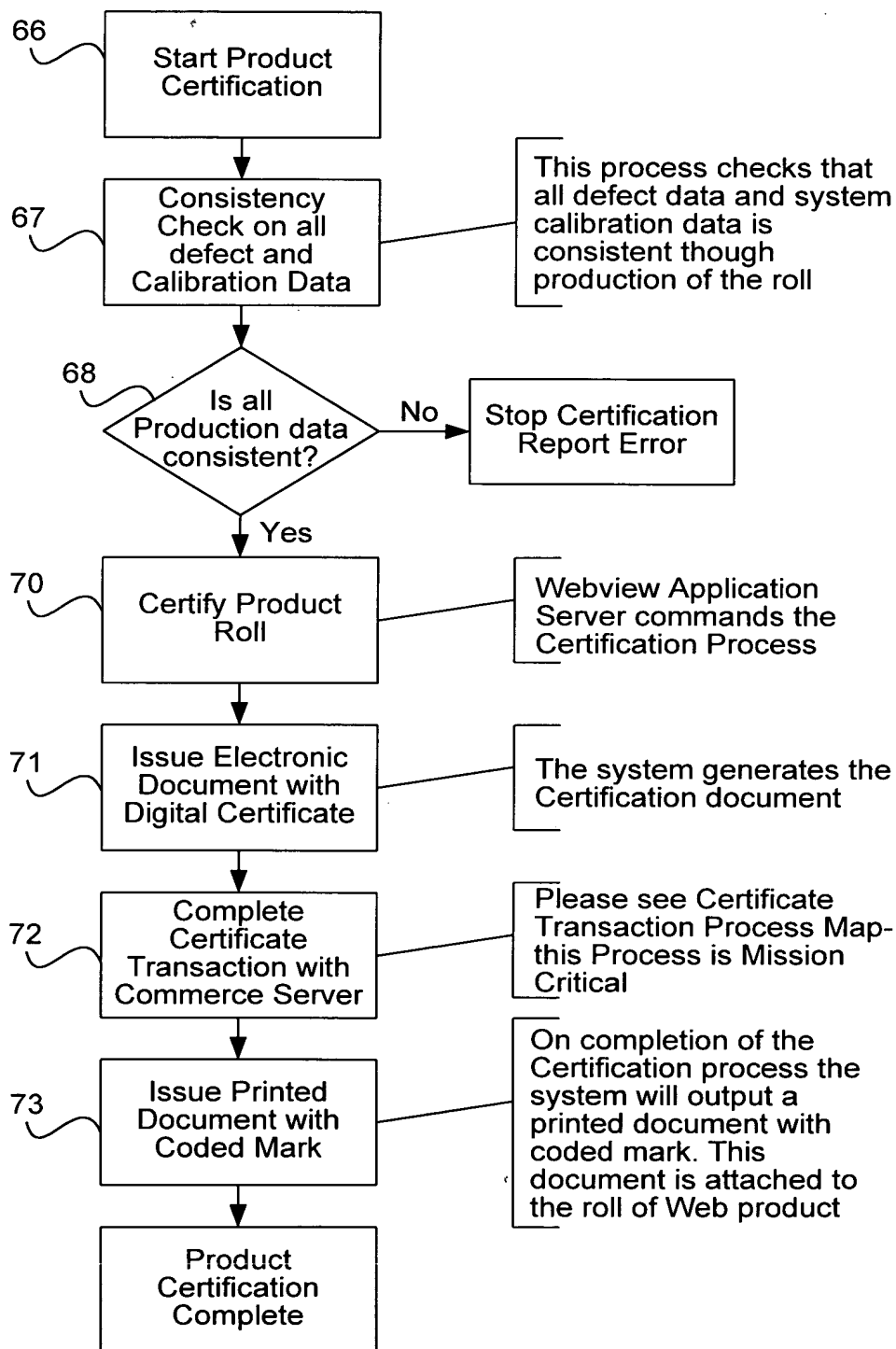This Process map describes the Calibration Process that occurs during a product Inspection

27

The Calibration test can be triggered be the system on an Internal Timer

Ref C: System Overview Process Map

Ref A: Inspection Process Map

57 → Request for Calibration → Timed Trigger

58 → Consistency Check on Product Calibration Data

Webview Application Server checks data retrieved from Commerce server against local records

60 → Is Product Calibration Data consistent? — **No** → Stop Calibration Report Error

Yes

Webview Application Server commands the Camera Server Process

61 → Start Calibration Test

This Calibration Data is associated with the Product being inspected in the Application Server database. Product/ Calibration tables are created during the installation of the System

This Process read a pre-determined set of environmental data from the camera- exposure levels, focus etc.

Acquire System Integrity data from camera

62

63 → Acquire Calibration data from Application Server database

65 → Compare Calibration Results

Webview Application Server oversees this Process

Product Calibration OK? — **No** → Stop Calibration Report Error

Yes

Continue

FIG. 6

Product Certification Process
This Process Map describes the Certification of a Roll of Web product.

25

66 — Start Product Certification

67 — Consistency Check on all defect and Calibration Data

This process checks that all defect data and system calibration data is consistent though production of the roll

68 — Is all Production data consistent? — No → Stop Certification Report Error

Yes

70 — Certify Product Roll

Webview Application Server commands the Certification Process

71 — Issue Electronic Document with Digital Certificate

The system generates the Certification document

72 — Complete Certificate Transaction with Commerce Server

Please see Certificate Transaction Process Map- this Process is Mission Critical

73 — Issue Printed Document with Coded Mark

On completion of the Certification process the system will output a printed document with coded mark. This document is attached to the roll of Web product

Product Certification Complete

FIG. 7

This Process can be started in one of two ways:
Ref A: Product Certification Process Map
Ref A: Verification Process Map

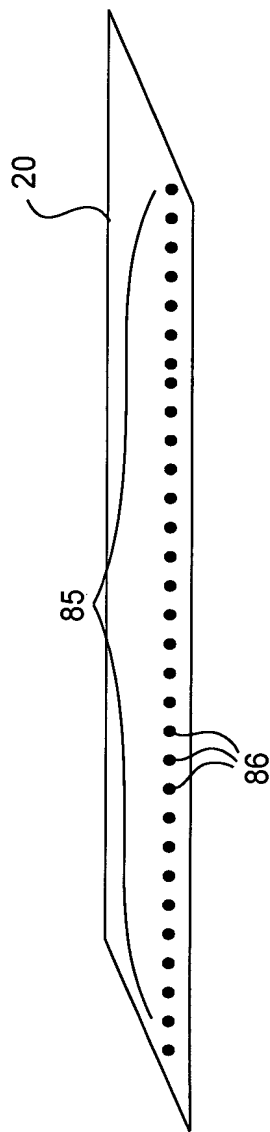Transactions follow a 2-phase commit, the system executes ACID transactions.
Atomic- the transaction executes completely or not at all.
Consistent- the transaction preserves the internal consistency of the database.
Isolated- the transaction executes as if it were running alone, with no other dependent transactions.
Durable- the transaction results will not be lost in failure.
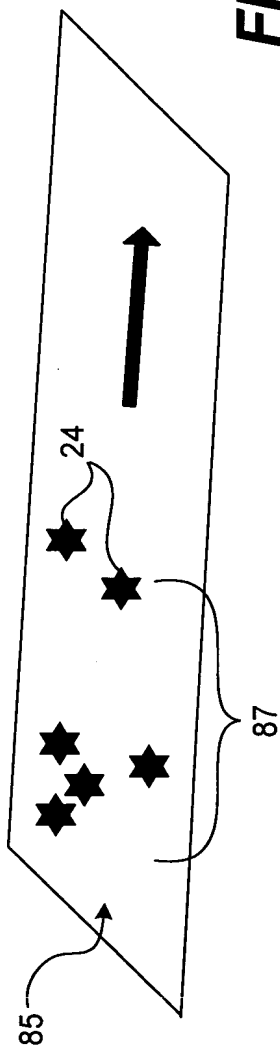
72

Start Certificate Transaction

Is Commerce Server Available?

No → Stop Transaction Report Error

Yes

75

Transact a Certificate TO the Commerce Server?

No → Transact a Certificate FROM the Commerce Server? 80

No → Stop Transaction Report Error Unknown State

Yes → Request Certificate 81

Transact Certificate TO Commerce Server 82

A copy of the Product Certificate is requested from the Commerce Server

Certificate Transaction Error?

Yes → Recover and Report Error

No → Update Logs

Yes

76

The Certificate is written to the disc of the Application Server, this is done to ensure recoverability

Cache data to local disc

77

A copy of the Product Certificate is uploaded to the Commerce Server

Transact Certificate TO Commerce Server

78

Certificate Transaction Error?

Yes → Recover and Report Error

No

Update Logs

End Transaction

Certificate Transaction
Certificate Transaction Process
The Commerce Server maintains all Product/Roll Certificates. Each Webview 3000 Application Server makes managed transaction with the Webview Commerce Server.

FIG. 8

FIG. 9A

FIG. 9B

Unwind (receiver) - mirror image of Windup (shipper)
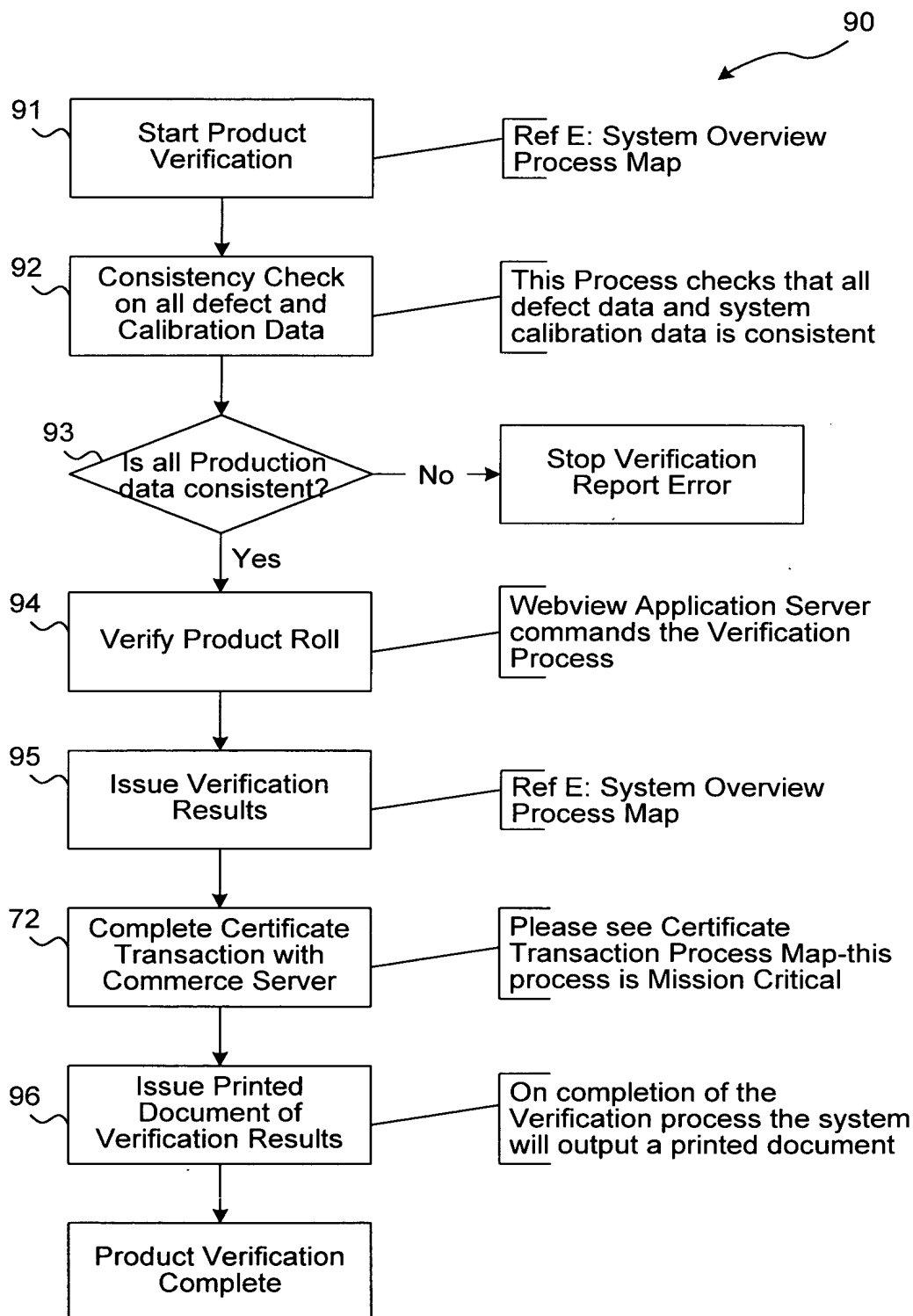
85

24

87

FIG. 10A
Shipper Windup

Receiver Unwind

87

24

85
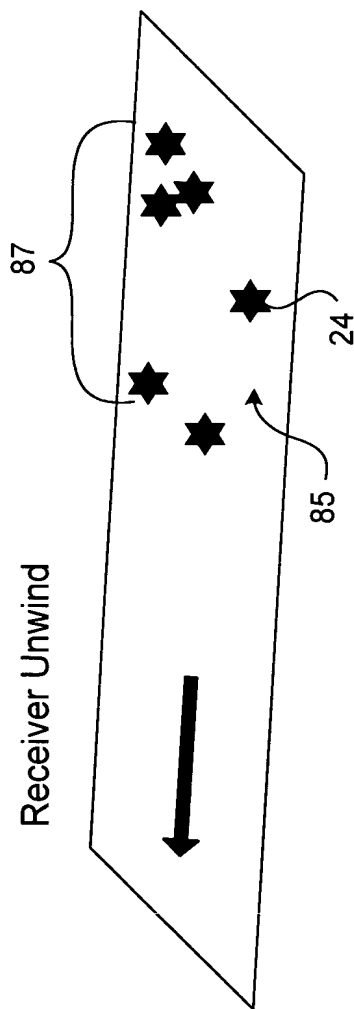
FIG. 10B

Product Verification Process
This Process Map describes the Verification of a Roll of Web product.
Verification occurs when a Roll undergoes re-inspection and the process
checks the original inspection data against the secondary inspection data.

90

91 — Start Product Verification — Ref E: System Overview Process Map

92 — Consistency Check on all defect and Calibration Data — This Process checks that all defect data and system calibration data is consistent

93 — Is all Production data consistent? — No → Stop Verification Report Error

Yes

94 — Verify Product Roll — Webview Application Server commands the Verification Process

95 — Issue Verification Results — Ref E: System Overview Process Map

72 — Complete Certificate Transaction with Commerce Server — Please see Certificate Transaction Process Map-this process is Mission Critical

96 — Issue Printed Document of Verification Results — On completion of the Verification process the system will output a printed document

Product Verification Complete

FIG. 11